

**ABSTRACT OF THE DISCLOSURE**

A system and method of collecting call data from a Mobile Telephone Switching Office and combining this data with location information of a wireless device (or devices) to generate information reports concerning the electromagnetic coverage of a cell site. The collection of call data from a switch permits consideration of uplink information in the analysis of system performance. This information combined with location information obtained using a time difference of arrival (TDOA) technique allows the cell site to be evaluated and to remove transient effects associated with, for example, local terrain and other physical impairments.